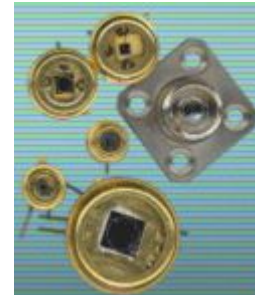


## Si PIN Photodiode IP-Si 101 Series

### Characteristics:

- Planar forward detecting method
- Fast response speed
- Low dark current
- High responsively
- High reliability



### Applications:

- Fiber optical communication, Sensing, Distance measurement
- Visible and near infrared detection, high speed optical pulse detection and industrial process control applications.

### Device mechanism:

Device works under the reverse bias, when light incident upon the device, the light is absorbed by semiconductor material, a pair of electron and hole will appear in the depletion layer or in the area near the depletion layer, and separated by the bias field. When carrier goes through the depletion layer, the photo current appear in the circuit, and then O-E conversion is completed.

### Technical specification: (TA=23 °C)

Parameter	Symbol	Test Conditions	Typical										Unit	
			0.2	0.5	1.0	1.3x1.3	1.3x1.3II	2x2	3x3	2.0	4.0	4.0II (5V)		
Diameter	Φ		0.2	0.5	1.0	1.3x1.3	1.3x1.3II	2x2	3x3	2.0	4.0	4.0II (5V)	mm	
Optical	Spectrum Range	λ	400~1100										nm	
	Responsivity	Re	V <sub>R</sub> =15V λ=900nm	0.45	0.45	0.5	0.5	0.40	0.5		0.5	0.5	0.35	A/W
		Re	V <sub>R</sub> =15V λ=0.53nm				0.15	0.20	0.1	0.15	0.15	0.12	0.25	A/W
Response Time	T <sub>r</sub>	V <sub>R</sub> =15V R <sub>L</sub> =50Ω	2	3	5		30			8	15	150	nS	
Electrical	Dark Current	I <sub>0</sub>	V <sub>R</sub> =15V	1	2	3	3	3	5	6	4	12	15	nA
	Reverse Break Down Voltage	V <sub>BR</sub>	I <sub>R</sub> =10μA	80	80	80		50			80	80	30	V
	Capacitance	C <sub>i</sub>	f=1MHz V <sub>R</sub> =15V	0.8	1.0	1.6	3.0	20			5	16	90	pF
Operating Voltage	V <sub>R</sub>		0-20										V	
Package			Coaxial II 5510 T04B			T0-5			T0-8		T0-8			
Saturation Power ≤ 0.3w/cm <sup>2</sup>														

## Characteristics Curve

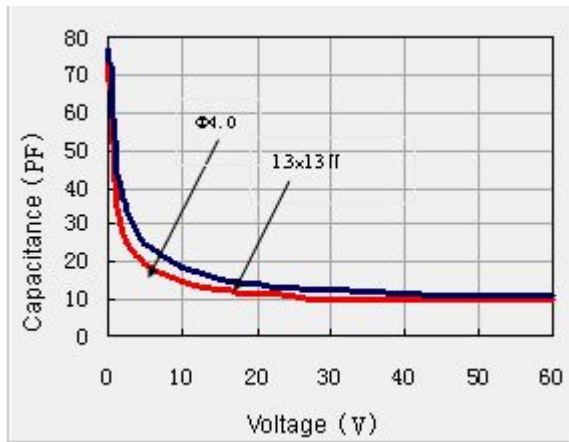


Figure 1 C-V Curve

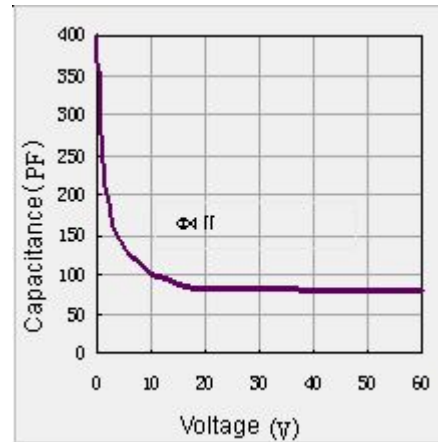


Figure 2 C-V Curve

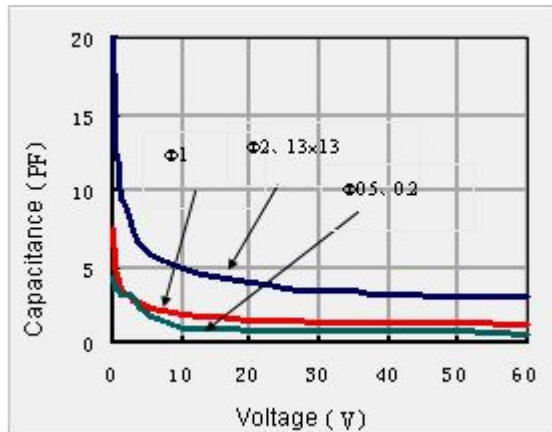


Figure 3 C-V Curve

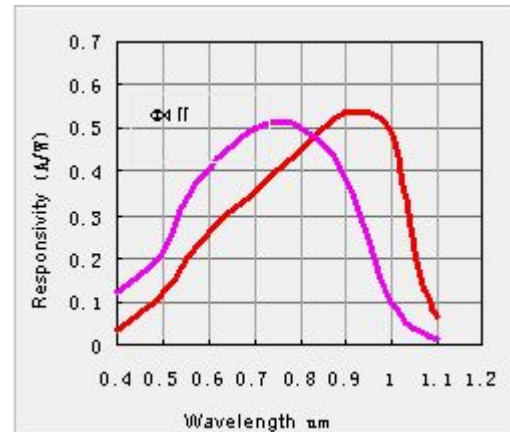
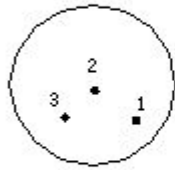
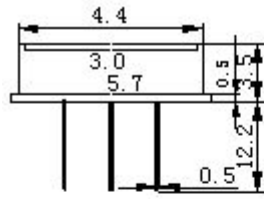
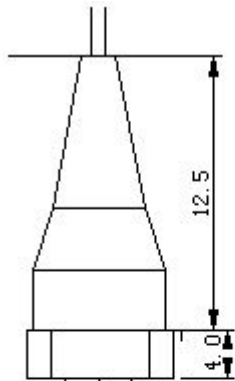
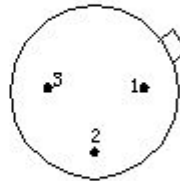
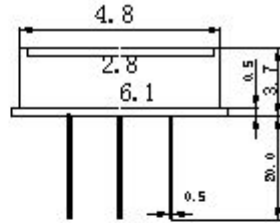


Figure 4 Spectral Response Curve

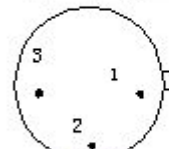
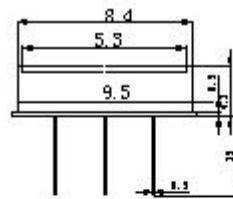
## Package Information and Usage instruction (Pin Configuration is the back View)



Coaxial II

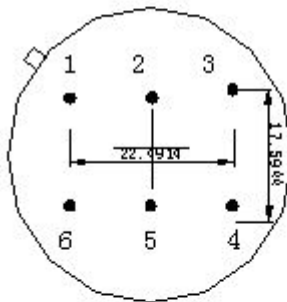
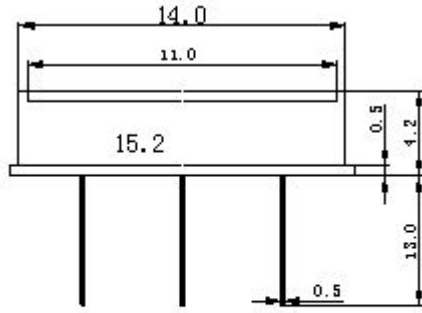


Coaxial II pigtail

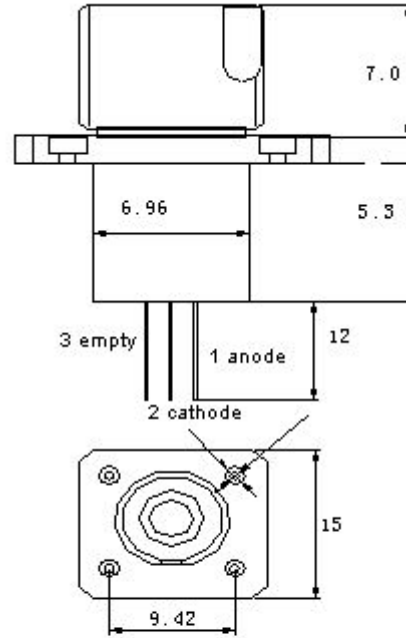


TO-5





TO-8



connector

